

DEVELOPING SPATIAL AESTHESIS THROUGH PHENOMENOLOGICAL APPROACHES TO TEACHING ARCHITECTURAL HISTORY

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ABSTRACT

In recent years, major schools of architecture have considered that teaching architectural history has become obsolete, for it could not possibly respond to the crisis our contemporary buildings and cities are facing, a crisis that derives, as increasing research demonstrates, from breaking apart architecture from its user, the human being.

Architectural history represents, simplistically expressed, the account of centuries of interaction between human beings and the spaces they created.

This paper will present a novel pedagogical methodology that uses a phenomenological approach in teaching the history of architecture, its purpose being to progressively and intuitively help students realize spatial perception is not a high abstraction, a complicated notion, but an objective biopsychological human feature they can access at any time and use to feel, understand and create spaces that will become places imbued with meaning.

Contemporary architectural pedagogy is preponderantly focused on cultivating spatial intelligence through a series of conceptual studio projects and theoretical courses dealing mainly with abstract notions. Even architectural phenomenology, when and where it is taught, remains at a theoretical level. Pedagogy focused on conceptual architecture creates architects with highly skilled aptitudes to produce only geometrically feasible and sound spaces, spaces that are not necessarily places to be inhabited in the sense Husserl, Heidegger, Merleau-Ponty, Norberg-Schulz, Alvar Aalto, Juhani Pallasmaa, Tadao Ando or Kengo Kuma would have meant them to be.

In such a conceptually-driven studio culture, using historical architectural precedents, analyzing them and extracting the essential, objective and unchanging principles they hold, and using those principles discovered through analysis in joint studio projects, has proved to offer interesting and unexpected benefits in students' ability to sense space, to understand the inherent qualities of various types of spaces and to subsequently make use of the acquired spatial experience in their projects, the results being architectural places, not just architectural spaces.

Though studying the different ways in which physical spaces have been artfully created and used, programmatically speaking, throughout the history of architecture, students are given the opportunity to understand how those spaces and their interrelations objectively affect humans as conscious beings, regardless of the culture they come from or the language they speak, and offer them a deeper

understanding of the spatial “alphabet” some architects write dry prose with, while others create profound, meaningful poetry.

Keywords: history of architecture, phenomenology, methodology, space, aesthetics

INTRODUCTION

After Modernist architecture instilled architectural education with two of its fundamental aspects, technical rationalism and functional determinism, post-Structuralism introduced the idea of conceptual architecture, stating that every architectural project had to have its genesis into a concept, an intellectual exercise in abstraction that ultimately led to the alienation of architecture and the architect from their main user and beneficiary, the human being. In architecture schools around the world, the concept of a building is still presented as being more important than the physical object whose spaces are meant to be inhabited. The architect has become a designer of shapes, without taking into consideration the ways in which those precise shapes will influence people. Architecture stemming from conceptual education has turned into high end design and architects forgot the basic purposes of architecture, to physically shelter from the elements and to induce a sense of protection and well-being.

Several contemporary architects and theoreticians, among which Tadao Ando, Steven Holl, Peter Zumthor, Kengo Kuma, Juhani Pallasmaa, as well as schools of architecture such as, to name only a few, the Leuven School of Architecture in Belgium, Delft in the Netherlands, or the Notre dame School of Architecture in the United States, increasingly state the need to rehumanize architecture, to transform buildings into what Siegfried Giedion, the critic of the Modern Movement, once called Alvar Aalto’s Villa Mairea, an *Opus con amore*. [1]

Apart from the built form, the essence of architecture and the element with which the best architects “compose”, because good architecture is like a wonderful musical or poetical composition, or as Leon Battista Alberti put it in “*De Re Aedificatoria*”, a proportional adjustment of parts, “so that one cannot add or subtract or change without impairing the harmony of the whole”, is something insubstantial and abstract, thus quite difficult to be taught, the felt quality of space, a spirit of the place different from the ancient sense of *genius loci*, yet rooted in the essence of the human being. In order to become a well-designed vessel for everyday’s life, the architectonic object has to offer places and spaces that satisfy the diverse physical and emotional needs of its inhabitants. While individual and personal emotions do condition and affect the way spaces are perceived, the reverse is also true: architectonic forms have the quality of shaping emotions. While spatial experience certainly has subjective aspects, the study of architectural history suggests there is an inherent psychological interconnectedness between the geometry of spaces and the way they are generally perceived and experienced. Given that spatial experiences cannot be separated neither from the spatial effect created by the architectonic form, nor from emotional and imaginative dynamics, phenomenological approaches to teaching ancient Greco-Roman architecture in the first year of

study have been experimented, as a way to raise in students the awareness of archetypal geometrical forms and spaces.

The idea for this new methodology of teaching architectural history was inspired by the common thread found in Martin Heidegger [2], the Gestalt theory, Gaston Bachelard [3], Maurice de Merleau-Ponty [4], who drew inspiration from Gestalt, and Christian Norberg-Schulz [5], the idea that there is a number of apriorically existing basic structures that represent stimuli for our understanding of environment and place. When we refer to inherent spatial characteristics, we allude to this precognition of things as such. Precognition is considered vital to our understanding of the environment by Norberg-Schulz. Everything is known through its Gestalt, this is how perception functions, according to both Merleau-Ponty and Norberg-Schulz. Merleau-Ponty continued and developed post-Husserlian phenomenology and focused on the primary experience of embodied human experience. To him, phenomenology is the study of essences, the essences of perception and consciousness. From the phenomenological point of view, the world is aprioric to reflection. Phenomenology aims at capturing the essences before reflection happens and creates a more direct contact with the world. World and self are inseparable and interwoven, considers Merleau-Ponty. We are in the world though our bodies and their sensory apparatus, which makes us perceive the world in a specific way. [6]

Logically following from the phenomenological conception of perception, the main objective of this new approach to teaching architectural history was to develop an in-depth understanding of architectural spatiality through the study of historical precedents, an understanding and spatial intuition to be used throughout their education and future career.

This first exercise in this method of teaching architectural history is meant to build mental bridges between the realm of spatial experiencing and the imagination needed for architect and student alike to create design solutions. In a first instance, a mandatory reading of Francis DK Ching's "Form, Space, and Order", along with studying ancient Greek and Roman architecture and town planning introduced and exemplified fundamental rules of spatial composition, such as symmetry, axiality, rhythm, proportion, scale, hierarchy, followed by more complex studies in the canons of beauty and principles for harmony. [7] Students are asked to analyze selected monuments, decompose them into their basic geometrical shapes (or Platonic solids) and discover and represent, diagrammatically, their rules



Figure 1. Compositional analysis of the House of the Faun in Pompeii

of composition (Fig. 1). In parallel, they are asked to add indirect sensory input and describe, in an exercise of imagination, how those spaces might make them feel. Since only a fraction was directly familiar with the monuments, exercises in intuitive perception of space are included. Upon reading Gaston Bachelard's "Poetics of Space", previous personal spatial experiences are recalled by each student in an essay about a future dream house – not about what it might look like, but about how it would make them feel. This represents the second step toward an intuitive awareness of spatial quality, sense of space or athesis.[8] At this point, Paul Valery's "Eupalinos or the Architect" is introduced as parallel reading, in order to further the discussion on the very abstract term used throughout one's architectural training and career, "poetic space" or "architectural poetry". [9] Making use of the abundant ancient Greco-Roman architectural examples, the method focused on analyzing the relationships between the geometry of spaces (rectangular, circular; proportions, human scale) and their openings, with special attention on natural illumination and light effects, as well as the feelings those might induce, thus bringing students closer to understanding how the character or nature of a space takes shape. As Steven Holl expressed it, "Experiencing the poetry of light and space is a confirmation of the exhilarating potential of architecture as a vessel for everyday life. From meditative space to inspiring details, architecture holds the potential to change the way we live. The house (...) is a container for the day's light, from the pale yellow of dawn to the deep blue of twilight. It is a box for the essential objects of life. It is a vessel for imagination, laughter, and emotion... and a silent space for the poetic sense of life." [10]

According to Bachelard, spatial experiences embrace the experience of reality intertwined with thoughts and dreams. It is precisely this synthesis between memory and imagination that makes possible the inhabitation of spaces in their real and virtual aspects. His "phenomenology of imagination" explains how perceptual experiences do not entirely depend on physical realities, but have an active imaginative component.

Perception is subjective in that it is relative to both personal body and mind. While the body is the point zero from which the spatial axes stem, and confers directions and dimensions to the space, the mind brings forth memories of former similar spaces and the sensations, thoughts and dreams associated to them. [11]

In a discussion with architecture students at Rice University, Louis Kahn spoke of the wonder the Roman Pantheon is and what an exceptional inspiration for architects it represents. When the emperor Hadrian thought about it, he said, he chose a non-directional shape and a unique light source from above, an oculus. The light is impalpable, yet it commands one to admire and follow it in space. Light and shape, light in shape make the space and give space its character. [12]

Kahn once asked what a brick might want to be and just like him, students are invited to ask themselves what a cube, a parallelepiped, a cone, a cylinder or a sphere might want to be. An upright parallelepiped might become a tower, a sign in the city, a lighthouse to guide the sailor towards the shore. Curved

spaces hold by physical nature, though the properties of their shape, unless one inverts the position and then they become a protective shape. Convex or concave, centrifugal or centripetal, accusing the horizontal or the vertical, directional or non-directional, right-cornered, pointed, obtuse or rounded, even or uneven, every shape has an inner, objective character. Therefore there is also a clear relationship between simple geometrical forms and their possible functions, and this relationship is made possible by the character or nature of that space as perceived by the observer.

Through the method of discussing and analyzing examples from ancient architecture in matters of geometrical composition, composition rules, proportions relative to human scale and illumination, students have the opportunity to understand that form is not a product of function, but that there is a complicated dialogue taking place between all the elements that make a building, which make it befit to one or more, even very different, functions. Were we to only take the example of Roman imperial baths, some of their ruins are now accommodating majestic churches, while the Baths of Caracalla have been used as architectural inspiration and precedent for New York's Grand Central Station, as well as for Louis Kahn's National Assembly building in Dacca, two seemingly very different programs, with quite different primary functions. What made that possible was the nature of the spaces, as well as their composition in space, as spatial hierarchies.

At the end of the first semester of the first year, under the title "Meditations on Beauty", students receive six different temples to study and analyze from the point of view of their basic geometrical shapes, rules of composition, illumination and canons of beauty, to choose one or more of them and by recomposing them, to produce a novel building with no function and no program, that will still be compositionally harmonious.



Figure 2. "Meditation on Beauty" using a generic temple plan as starting point

So far, the exercise has been a success and has revealed what architects know, but can seldom reach for in the students they teach: we all have in ourselves the ability to sense space, to feel when it is disproportionate and disharmonious, or

when everything falls in the right place like a well composed piece of poetry; the challenge is finding the right way to help architecture students reach for that inner potential and inner spatial wisdom.

Along with the physical models of their functionless, yet beautiful buildings, students had to present them in detail, discussing the spaces they used and the reasons for using them, as well as directions of perspective, pathway axes, spatial rhythms and, most importantly, to describe how those imagined spaces made them feel and what types of emotions they might or would induce in different inhabitants.

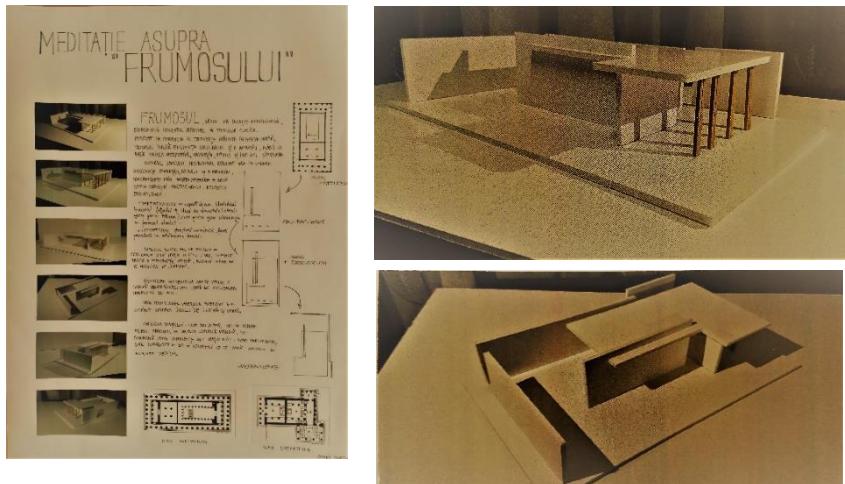


Figure 3. "Meditation on Beauty"; analysis and reinterpretation of the Parthenon and Erechtheion

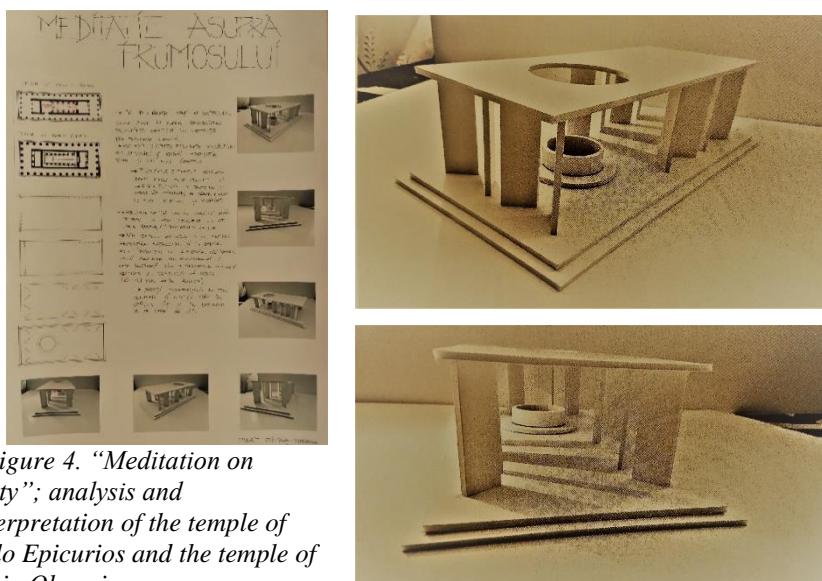


Figure 4. "Meditation on Beauty"; analysis and reinterpretation of the temple of Apollo Epicurius and the temple of Zeus in Olympia

As figures 2, 3, 4, 5, 6, and 7 show, apart from composition, students paid special attention to light. In future exercises, the procession through space guided by light was the main focus, but even when it was not the main point of interest, they manifested a real interest in studying the interactions between the material and the immaterial, the solids, the light and shade, the transition from light to darkness and back.

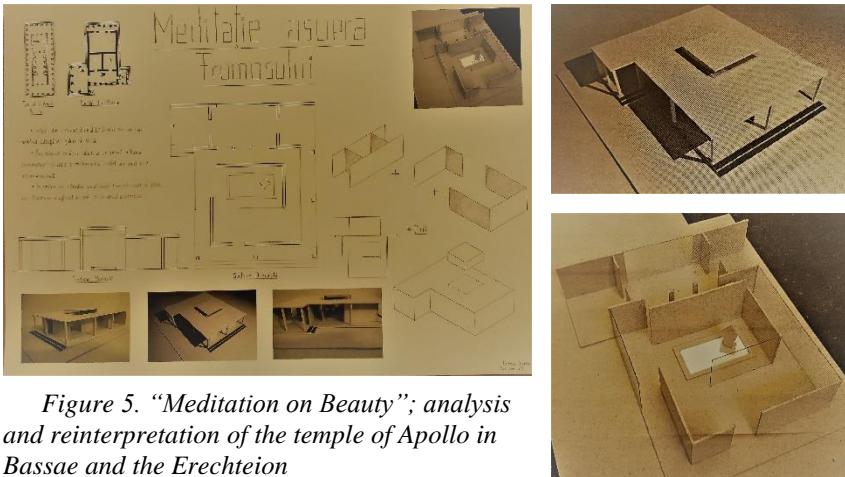


Figure 5. "Meditation on Beauty"; analysis and reinterpretation of the temple of Apollo in Bassae and the Erechtheion

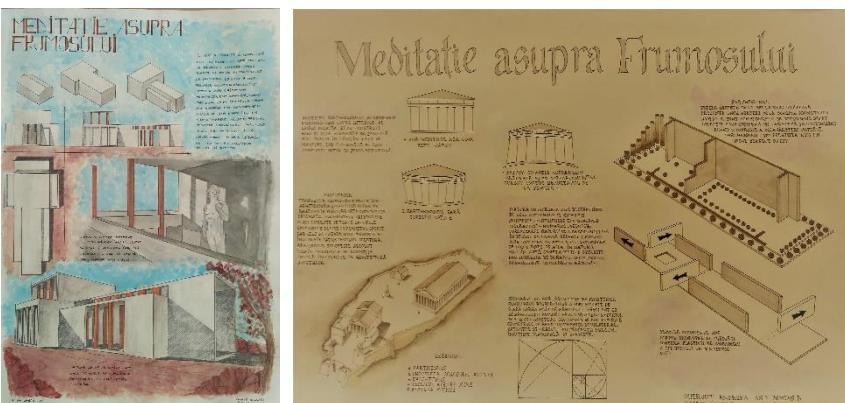


Figure 6. "Meditation on Beauty"; studies on form and light.

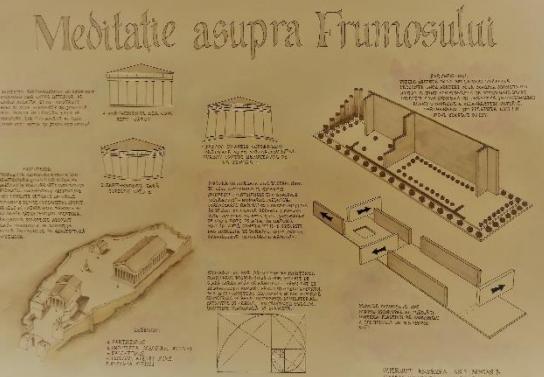


Figure 7. "Meditation on Beauty"; analysis and reinterpretation of the Parthenon

CONCLUSION

The ultimate meaning of architecture is beyond the built aspect; in redirecting consciousness back to the world and towards the sense of self and being-into-the-world, by heightening phenomenal experience, architecture expresses meaning and becomes meaningful. In recent years it has become increasingly clear that new architectural forms are alienating the human inhabitant, conceptual education having played a strong role in the rise of dehumanizing architecture. To the need of

re-educating architectural students into the mysteries of aesthetics, of what spaces want to be, to paraphrase Kahn, architectural history offers a multitude of powerful examples of places and buildings composed of spaces with strong, clear character. A simple, very pedagogical approach to studying the history of architecture, especially the Greco-Roman one, when the first rules of composition and canons of beauty that have reached to us have been documented, can provide architectural education with a strong tool for architectural design.

The present paper presented the first series of theoretical and practical exercises first year students undergo in their first semester of studies. The method is subsequently applied, with increasing complexity, in the following semesters, studying Romanesque, Gothic, Renaissance and Baroque architecture. Starting from the basics, the geometric forms architecture works with, each exercise brings a new element into play up to the point of analyzing the relationships between spaces and their associated symbolic meaning throughout historical periods and cultures.

Promoting an experiential awareness of space, involving the functions of memory, of imagination and fantasy, the phenomenological approach to teaching architectural history has proved to be a facilitating factor in helping students understand the immaterial essence architects work with, the essence of space.

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